

# Corruption and ideological voting

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## **Abstract**

This paper examines the effect of corruption on ideological voting. Linking previous studies of political corruption with theories of ideological voting, I argue that when corruption is high, voters place less importance on ideology in voting than otherwise. The reason for this effect is related to voters' reduced perceptual accuracy of parties' positions and their low political efficacy in these contexts. Using data from 97 elections from the Comparative Study of Electoral Systems, I show that in countries with high corruption voters factor ideology less in their vote decision partially because they have difficulties identifying parties' ideological positions and/or they do not believe parties can implement the electoral programs. These relationships hold when I control for socio-economic and political confounders, or for voters' increased likelihood of abstaining when corruption is high.

**Keywords:** Political corruption, ideological voting, perceptual accuracy, political efficacy, hierarchical simultaneous equations models, Heckman selection models

# 1 Introduction

Scholars commonly assume that corruption affects elections in two ways: either by reducing turnout (Davis et al. 2004; Slomczynski and Shabad 2012; Stockemer et al. 2013; McCann and Dominguez 1998; Kostadinova 2009) or by increasing retrospective voting against the incumbent (Hibbing and Welch 1997; Peters and Welch 1980; Choi and Woo 2010; Klačnja and Tucker 2013; Shabad and Slomczynski 2011; Zakaria 2013; Fackler and Lin 1995; Manzetti and Wilson 2007). This paper extends this research and argues that the effects of corruption on elections go beyond what political scientists usually expect. Specifically, corruption negatively affects the magnitude of ideological voting.

Building on previous studies on political corruption and theories of ideological voting, I argue that prevalent corruption affects negatively the two conditions of ideological voting: (1) that voters are able to identify the unique positions of parties, and (2) that they believe that parties represent them in the legislative process. When corruption is high, people feel alienated from politics (Anderson and Tverdova 2003; Canache and Allison 2005; Seligson 2002; Kostadinova 2009) and from the policy making process (Theobald 1990; Della Porta 2000). Parties instead focus on clientelistic promises or allegations of corruption, and less on ideological programs. In consequence, voters have difficulties in identifying parties positions and do not trust that parties will implement the policy proposals. Hence, they vote less ideologically. In like manner, electoral behaviour researchers show that contextual factors that make ideological considerations accessible and the left-right scale clearer, e.g. polarization and number of parties, increase the magnitude of ideological voting (Lachat 2008; Dalton 2008; Kroh 2009; Singh 2010; Fazekas and Méder 2013). Moreover, factors such as political efficacy and majoritarian systems, associated with parties' perceived high chances of implementing their ideological programs, correlate highly with the magnitude of ideological voting (Kedar 2005; Karp and Banducci 2002; Singh 2010).

In testing the above propositions, I encounter nevertheless two methodological challenges: (1) the selection into voting of those who turn out to vote when corruption is high, and (2) the possible spurious relationship between corruption and ideological voting. People may choose to abstain when they cannot identify parties' ideological position or when they they do not believe parties will implement the ideological programs. That leads to selection bias when I estimate the effect of corruption on the restricted sample of voters. In addition, socio-economic and political factors such as democratic experience, age of party system, number of parties, or electoral systems correlate with both ideological voting and corruption. Hence, the relationship between corruption and ideological voting could be spurious. I address these empirical issues by using Heckman selection models of turnout and vote choice, and by controlling for the effects of other macro confounders on ideological voting in different model specifications at the end of the empirical analysis.

I test my claims on 97 elections in 36 countries, with data from all CSES modules between 1996 and 2015. The analysis is developed in three steps. First, I test whether corruption has an effect on ideological voting by examining the cross-electoral variation of the weight voters assign to their proximity to parties' ideological position in their voting decision as a function of corruption. Second, I put to test the effect of corruption affects perceptual accuracy and political efficacy and then estimate whether the effect of corruption on ideological voting is indeed mediated by these two. Third, I estimate the Heckman selection model and other robustness tests of the effect of corruption on ideological voting.

The results show that corruption has a strong negative effect on ideological voting: in high corruption countries (e.g. Albania in 2005) the magnitude of ideological voting is on average by around one standard deviation smaller than in low corruption countries (e.g. Finland in 2011). In other words, voters are 65% more likely to vote based on ideological considerations when they live in low corruption countries than in high corruption countries. Empirical tests also show that corruption strongly affects perceptual accuracy and political efficacy, which in turn affect the magnitude of ideological voting.

This study offers new insights into the negative effects of corruption. By reducing the role of ideological considerations in elections, corruption undermines democratic programmatic party-voter linkages and the role of elections in policy-agenda setting. Without clear indications of voters' policy preferences, parties can focus on non-policy activities, including corruption, which weakens further citizens' feelings of political efficacy and reduces their ability of identifying parties' ideological positions. These implications are discussed at length in section 6. The next section presents a short overview of the literature on corruption effects in elections. In section 3, I extend this research to ideological voting and develop my theoretical arguments. Section 4 introduces the data and variables, and section 5 presents the models and the results.

## 2 Corruption and electoral behaviour

More than a decade ago, Brooks (1909) said that “[I]n the whole vocabulary of politics it would be difficult to point out any single term that is more frequently employed than the word “corruption””. After all this time, corruption is still strongly associated with politics, and people refer to it when they talk about misconduct and wrongdoing in the public sphere. Seen as misuse of public power for private interests (Sandholtz and Koetzle 2000), political corruption implies that politicians favour certain individuals (their clientelistic networks) and their preferences in the policy-making process, at the expense of the rest of the population.

These traits of corruption have been found to poison public sentiment toward democracy (Canache and Allison 2005: 106) and increase mistrust and feelings of alienation (Della Porta 2000; Rose-Ackerman 1999; Seligson 2002). Citizens report lower levels of trust in civil servants (Anderson and Tverdova 2003) and low political efficacy (Kostadinova 2009). They are less confident in government's ability to consider their concerns (Della Porta 2000) and feel excluded from the policy-making process (Theobald

1990).

These effects of corruption have been associated with low electoral turnout. People participate less in elections when corruption is high because they believe that their vote cannot make a difference (Davis et al. 2004; Slomczynski and Shabad 2012; Stockemer et al. 2013; McCann and Dominguez 1998). When they vote, they are expected to throw the rascals out, but this not always happens (Hibbing and Welch 1997; Peters and Welch 1980; Shabad and Slomczynski 2011; Zakaria 2013; Fackler and Lin 1995; Manzetti and Wilson 2007). The extent to which corruption matters for retrospective voting depends on partisanship (Ecker et al. 2015; Anduiza et al. 2013; Vivyan et al. 2012), the salience of corruption (Choi and Woo 2010; Slomczynski and Shabad 2012; Shabad and Slomczynski 2011; Zakaria 2013; Klačnja and Tucker 2013; Burlacu 2014), or the type of corruption (Klačnja et al. 2016).<sup>1</sup>

Electoral behaviour researchers have nevertheless omitted the effect of corruption on other voting strategies, such as ideological voting. One possible explanation is that if corruption increases retrospective voting, the magnitude of other voting strategies declines. This view is based on the assumption that voters firstly decide whether to engage in a punish-reward strategy and then factor or not their ideological proximity to parties in the voting decision. Without clear empirical evidence of a chronological sequence of voting decision making, it is hard to establish whether ideological voting is conditional or not on retrospective voting. In this paper, I develop the theoretical argument based on the assumption that corruption has an impact on ideological voting independently of whether people punish (or reward) the incumbent for corruption. At the end of the paper, I discuss in turn whether the new understanding of corruption's impact on electoral behaviour complements or challenges the old retrospective corruption voting model. I argue that corruption erodes the importance of ideological voting because it reduces individuals' potential of identifying parties' positions and because it dampens

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<sup>1</sup>A review of retrospective corruption voting model is beyond the scope of the paper.

their belief that parties can implement the proposed electoral programs.

### 3 Ideological voting and corruption

The ideological model of voting predicts that the expected utility of voting for a party increases with its proximity to voters' ideological or policy position (Downs 1957). That means that voters are the most likely to vote for the party closest to them on the ideological scale.<sup>2</sup> The extent to which voters engage in ideological voting depends however on two conditions: 1) that they accurately identify parties' positions, and 2) that they believe in parties' ability to implement the electoral programs.

The first condition of ideological voting is based on the assumption that voters choose among parties ordered on a common political space. In other words, parties need to present clear policy platforms and voters should be able to place these platforms on an ideological scale. If they do not know or are uncertain about parties' positions, they cannot vote ideologically because they either do not know which party is closer or cannot take the risk that the party they vote for is in fact further from them (Page 1976; Alvarez 1998). The high cognitive costs of ideological voting makes this more likely among those educated (Tomz and Van Houweling 2008) and with a high level of political knowledge (Singh and Roy 2014; Jessee 2009, 2010), political interest (Singh 2010), or political sophistication (Macdonald et al. 1995; Knight 1985).

As a result, ideological voting varies with the complexity of electoral and party systems, that fosters or dampens voters' ability to place parties on a common ideological scale. For example, polarization, i.e. the degree of ideological differentiation between parties, increases the salience of ideological considerations and, as such, makes ideological concepts more easily accessible (Lachat 2008; Dalton 2008; Kroh 2009; Dalton 2010). Voters

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<sup>2</sup>See Singh and Roy (2014: 91) for a short review of the empirical and theoretical tests the ideological voting model withstood.

can thus compare their ideological positions to parties' positions. In like manner, few competitive parties, ideologically distinct choices, and unidimensional competition increase the magnitude of ideological voting (Singh 2010; Fazekas and Méder 2013; Wessels and Schmitt 2008; Burlacu and Toka 2014).

A second condition of ideological voting, although less discussed in the literature, is voters' confidence that the party closest to their ideological position will be successful in implementing the advocated electoral program. Either because of prospects of a coalition government or of confidence in political parties, voters are more likely to vote ideologically when they are certain that parties can implement their electoral programs. For example, in majoritarian systems, ideological voting is more likely as voters can be more confident that if in power, the chosen party will compromise less because the likelihood of a coalition is lower than in proportional systems (Kedar 2005; Karp and Banducci 2002). In the same way, individuals who find politics meaningful are more likely to vote ideologically than those who think that the political process is distant and non-responsive (Singh 2010). Moreover, programmatic linkages require *ex ante* credibility: "voters must believe that parties will both remain committed to stated policy platforms if elected and have the capacity to implement these platforms once in office" (Kitschelt and Kselman 2013: 1456).

In a nutshell, the magnitude of ideological voting depends on: (1) voters' potential to accurately identify the true positions of parties/candidates in relation to their own ideological position;<sup>3</sup> and (2) voters' belief on parties' prospects of implementing the ideological programs.<sup>4</sup> Political corruption affects each of these conditions. First, when corruption is high, the electoral discourse is more focused on clientelistic benefits or corruption blaming than on policies and electoral programs. In addition, the new anti-system parties have not had time to develop clear and consistent programmatic

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<sup>3</sup>I use the term potential as a composite term that includes the system induced uncertainty and misinformation, and voters' own skills and cognitive capacities.

<sup>4</sup>I use the term belief and not confidence to distinguish this second condition from political confidence/trust. The latter is one of the factors that influences individuals' perceptions of ex-ante credibility of political parties.

messages. Corruption also increases electoral volatility (Crisp et al. 2014) which makes it hard for both voters and parties to predict future policies with certainty. Individuals may also question the validity of policy programs and the true intentions of politicians in light of corrupt lies and empty promises. Thus, when corruption is high voters' potential to identify parties' true ideological positions as well as the likelihood of voting ideologically are lower than when corruption is low.

Second, even if voters could identify parties positions in context with high corruption, they have less confidence in the representation function of political parties, politicians, or the electoral system. As already discussed, people do not feel included in the policy making process when corruption is high, they distrust political parties, and have less political efficacy. Hence, their reliance on a party's chances of implementing the advertised policies is lower and, as such, their likelihood of voting proximately is lower than in a corruption free context. Although I expect the strongest results in countries where corruption is systemic, corruption scandals in countries like the US and the UK have been found to affect not only politicians' evaluations, but also attitudes towards political institutions (Bowler and Karp 2004).

Taken together, these claims generate three testable hypotheses:

H1. Citizens are less likely to vote ideologically in high corruption countries than in low corruption countries.

because

H2. Citizens are less likely to accurately identify parties' ideological position in high corruption countries than in low corruption countries. (*Perceptual accuracy hypothesis*)

and

H3. Citizens are less likely to believe in parties' implementing their ideological program in high corruption countries than in low corruption countries. (*Political efficacy hypothesis*)



## Disentangling the effect of corruption on ideological voting, turnout, and retrospective voting

One of the challenges of testing empirically the above relations is to disentangle the effect of corruption on ideological voting from its effects on turnout. Feelings of distrust, alienation, and low efficacy associated with corruption can affect both individuals' willingness to participate in elections and the weight of ideological considerations in voting. When corruption erodes turnout by increasing feelings of misrepresentation and alienation (Slomczynski and Shabad 2012; Stockemer et al. 2013; McCann and Dominguez 1998), voters sample is biased towards those who feel efficacious or think that corruption is low, which might then lead to biased estimates of the effect of corruption on ideological voting. Without aiming to identify a chronological order of turnout and vote-choice (i.e. individuals decide first whether to vote or not and then whom to vote for), I measure the effect of corruption on ideological voting after estimating its effect on turnout using Heckman selection models.

A second challenge is that a small magnitude of ideological voting could result from a high magnitude of retrospective corruption voting. People could be voting less on ideological or policy principles because their vote choice is driven by retrospective considerations, i.e. punishing or rewarding the incumbent for its performance on corruption. It is still under debate whether prospective and retrospective voting are complementary or exclusive strategies, and whether there is a chronological order in voters' decisions, i.e. they vote retrospectively because they could not find a viable party close to their ideological position or they do not vote for the closest party because they want to punish/reward the incumbent. Without aiming to establish a causal order between ideological and retrospective models of voting, I assume that the effect of corruption on the two conditions of ideological voting are less dependent on voters' retrospective voting. Retrospective voting remains however a plausible alternative explanation and future research could test, possibly in an experimental set-up, whether voters base their decision first on

retrospective evaluations and then on ideological positions or vice-versa.

A third challenge is testing whether the relationship between corruption and ideological voting is not in fact spurious, caused by third factors that influence both corruption and ideological voting. Scholars of party-voter linkages have found strong association between both programmatic and clientelistic linkages, and democratic experience, age of party system, and level of economic development (Kitschelt and Kselman 2013; Keefer 2007; Lupu and Riedl 2013). Young democracies are characterised by high levels of corruption, underdeveloped party systems, and electoral volatility (Birch and Wallace 2003; Powell and Tucker 2014; Tavits 2005). Parties cannot offer coherent, credible policies when their ideological position is not fully established, while voters cannot identify parties' true positions. In addition, uncertainty about election outcomes and governing coalitions makes voters in new democracies vote for extreme parties rather than the party closest to their ideological position (Ezrow et al. 2014). Similarly, low economic development increases voters' uncertainty and their responsiveness to clientelistic political offers (Kitschelt and Kselman 2013), and reduces the resources people can devote to cognitively intense voting decisions (Lau and Redlawsk 1997).

Political corruption scholars have identified several other political variables associated with corruption, which also affect ideological voting. PR systems are associated with higher levels rent-seeking corruption (Kunicova and Rose-Ackerman 2005), but this depends on the the type of PR system(open or closed lists) and on the district magnitude (Chang and Golden 2007). In addition, centralized rather than federal states, and presidential rather than parliamentary systems foster lower corruption (Gerring and Thacker 2004). Likewise, high clarity of responsibility (measured by incumbents' majority status in the legislative) reduces corruption (Tavits 2007) and could also reduce ideological voting. In order to distinguish the effect of corruption from the effect of other institutions and political variables, I control for these in estimating the weight people attach to ideological considerations when voting.

## 4 Data and variables

In order to test my hypotheses, I use the electoral studies for democratic parliamentary elections collected by Comparative Study of Electoral System (CSES) between 1996 and 2015.<sup>5</sup> The CSES collects cross-national post-election studies since 1996 from more than 40 countries. I pool its four modules and after excluding elections due to lack of data on corruption or other macro indicators, I end up with 97 elections in 36 countries.<sup>6</sup> 34% of elections in the sample are in non-European countries, 49% in Western European countries, and 17% in Eastern Europe. In the second part of the analysis, the sample is restricted to 88 countries because several individual-level indicators (e.g. income) were not available in 9 countries. In total, there are 66 987 individuals who answered all survey items of interest in those 88 countries.

### **Ideological voting and ideological proximity:**

To measure the magnitude of ideological voting, I estimate vote choice models with ideological proximity to political parties as one of the main predictors. The coefficient of the ideological proximity indicates the extent to which individuals with an ideological position closer to a party are more likely to vote for that party.

*Ideological proximity* is measured using a linear loss:

$$I_{ikj} = -|RIP_{ij} - PIP_{kj}|$$

It is thus calculated as the reversed absolute difference between the self-reported left-right position  $RIP_{ij}$  of respondent  $i$  from country  $j$  and the ideological position of party  $k$

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<sup>5</sup>I exclude the studies from presidential elections because of the distinct nature of the voting for a president. This applies to 12 election studies (Belarus 2001, Chile 1999, France 2002 and 2012, Lithuania 1997, Peru 2000, Philippines 2010, Romania 2009, Russia 2000 and 2004, Taiwan 2004 and 2008)

<sup>6</sup>For each indicator, the missing cases are presented in Footnotes. The countries in the sample are: Albania Australia, Austria, Brazil, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Mexico, the Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, United Kingdom, United States, Uruguay

in country  $j$   $PIP_{kj}$  on the same scale.<sup>7</sup> A party's ideological position is calculated as the average party position reported by respondents with high political sophistication (those who answer correctly at least two out of the three political knowledge questions in Module 1-3 and at least three out of the four questions in Module 4) (Gingrich 2014; Golder and Stramski 2010). In countries where political knowledge items are missing, party position is calculated as the average placement by all respondents. Measured on a 0-10 ideological scale, high values of ideological proximity indicate a closer proximity to the party.

### **Vote choice:**

The dependent variable in the vote choice models is self-reported vote in the current election. CSES recodes both party-list and district vote, according to the electoral system used in the year of the study.<sup>8</sup> In mixed electoral systems, I use party-list self-reported vote for all respondents who reported a party-list vote, and the district vote for the others. Vote choice is limited to a maximum number of six parties for which I can measure respondents' proximity to, because CSES asked respondents to indicate the ideological position of up to six main parties in a country, ordered descending based on seat share. In countries where ideological position is reported for more than three parties, I exclude the party with the lowest vote share in the CSES database. For these parties, there is a significantly high proportion of missing values for party positions items and a substantially low number of respondents who indicate voting for that party, which in some cases impedes the conditional logit models to converge.

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<sup>7</sup>For Japan(1996 and 2004) the left-right scale is replaced by a similar liberal-conservative scale. There is no information on party position in Belgium (2003), Chile (1999), Russia (2000), Thailand (2001, 2011), United States (1996).

<sup>8</sup>The elections are at the lower house in all electoral studies, except for Japan in 2004 and 2007 when the elections were for the upper house.

## Corruption

Corruption is measured at the macro level using the indicator of control of corruption from the International Country Risk Group. The ICRG indicator is based on the evaluations of the Political Risk Group editors using pre-set questions about the political risk in each country associated with different corruption features (i.e. excessive patronage, nepotism, job reservations, favour-for-favours, secret party funding, and suspiciously close ties between politics and business).<sup>9</sup> These are calculated using identical rules for all countries, which makes the cross-national comparison possible. The political risks associated with corruption are calculated monthly, and for the analysis, I use the average of the monthly estimates from the election year. The monthly estimates are bound between 1 and 6, but the censored nature has been found to dampen the effect of corruption on election results, thus providing a more conservative test (Burlacu 2014). The initial values of the annual average has been recoded to a 0-1 scale, with high values indicating high corruption.

At the individual level, CSES provides, in its second module, a survey item measuring individual perceptions of corruption. Models with perceived corruption instead of the macro indicator of corruption are presented in the Online Appendix (Tables 8-12), for comparison and cross-validation. The reader should consider those in light of the endogeneity between perceived corruption and vote decision, perceptual accuracy, and political efficacy (see also Seligson (2006)).

## Perceptual Accuracy

The first condition of ideological voting affected by corruption is voters' potential for positioning parties on the ideological scale. This depends on two factors: 1) voters' cognitive ability of identifying a party position and 2) their (un)certainly with regards to their perception. A voter might be able to indicate a party position with a 30 %, 50 %, or even 90% certainty. The level of certainty then influences whether they vote

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<sup>9</sup>There are no data on corruption in Kyrgyzstan (2005).

ideologically or not. CSES asked respondents to place parties on an ideological left-right (or alternative policy) scale. They do not question respondents on how certain they are about their answer. I thus construct the mediator based only on respondents' placement of parties' positions. Nevertheless, those who are uncertain report parties' positions with error (Alvarez and Franklin 1994). Thus, the accuracy of individuals' perceptions reflects both how likely they are to identify parties' positions and how certain they are about the answer. As such, I use perceptual accuracy as a proxy of individuals' potential in identifying parties' positions. Comparing voters' assessments of parties' positions with the positions given by CSES country experts on the same scale, I estimate how likely respondents are to identify parties' true positions. I calculate perceptual accuracy as the reversed mean of the absolute differences between respondent's perceptions and CSES experts' opinions of parties' ideological positions:

$$\text{Perceptual accuracy}_{ij} = - \frac{\sum_{k=1}^K (|PIP_{kij} - EPIP_k|)}{K}$$

where  $k$  is the party whose position is identified by respondent  $i$  in country  $j$  ( $PIP$ ) or by the CSES experts ( $EPIP$ ) and  $K$  is the number of parties each respondent placed on the ideological scale. The variable is initially between 0 and 9, and I recode it into a 0-1 scale, with high values indicating high perceptual accuracy. I use expert perceptions instead of the average placement of the most knowledgeable respondents, because the latter could be biased compared to experts' opinions in high corruption countries. The measures calculated with experts' opinions or the most knowledgeable's placement are nevertheless highly correlated ( $r=0.82$ ), and the correlation with corruption at the macro level is in both cases strong, above 0.5.

### Political Efficacy

The second condition of ideological voting also affected by corruption is voters' belief on parties' prospects of implementing their ideological programs. This is a function

of political confidence and political efficacy. CSES does not include survey items on political confidence, but it measures political efficacy. Voters are asked whether they think it makes a difference who is in power.<sup>10</sup> The variable is measured on a 1-5 scale, which I recode into a quasi-continuous 0-1 scale for ease of comparison with perceptual accuracy. Models estimated using the initial 5 point scale with ordered logit models lead to similar results as models using the quasi-continuous measure.

### Individual and Country-Level Controls

I control for a range of standard individual level characteristics typically used in vote-choice models: partisanship, age, gender, urban and rural residency, education, income<sup>11</sup>, and market position - e.g. employed, unemployed, retired, not in the labor force. At the country level, I include an indicator of economic growth to control for retrospective voting in the presence of no individual level evaluations of the economy in all CSES modules.<sup>12</sup> In addition, I control for macro confounders which could affect both corruption and ideological voting: the level of economic development, democratic experience<sup>13</sup> (in years) and different political and electoral institutions<sup>14</sup>: party age, PR and plurality electoral systems, effective number of parties<sup>15</sup>, district magnitude, federalism, presidentialism, and majority status of the incumbent in parliament. As the sample includes a heterogenous group of countries, I also include a categorical variable for whether the countries belong to Eastern or Western Europe or they are outside Europe. Economic data is taken from World Bank, democratic experience from Polity IV (Marshall

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<sup>10</sup>There is no data available for political efficacy in Canada 2011, Switzerland 2007, Germany 2005, Ireland 2007, 2011, the Netherlands 2002, Poland 2005

<sup>11</sup>Income data missing for Belgium (2003), South Korea (2012), Latvia (2010), South Africa (2009)

<sup>12</sup>Economic development and growth data missing for Taiwan (1996, 2001, 2004, 2008, 2012)

<sup>13</sup>No Polity IV data available for Hong Kong (1998, 2000, 2004, 2008)

<sup>14</sup>No political institutions data for Hong Kong (1998, 2000, 2004, 2008), Montenegro (2012) and Serbia (2012)

<sup>15</sup>No data on effective number of parties for Belarus (2001 and 2008), Brazil (2002, 2010), Hong Kong (1998, 2000, 2004, 2008), Japan(2004, 2007, 2013), South Korea(2008), Philippines (2004, 2010), Russia (1999), Thailand (2001, 2007), Turkey (2011, 2015), Taiwan (1996, 2001), Ukraine(1998)

and Jagers 2012), effective number of parties from Gallagher (2017), and all the other political variables from the Database of political institutions (Beck et al. 2001).

## 5 Models and results

The analysis is divided into three parts. First, I test the main hypothesis H1 that corruption has an effect on ideological voting by examining the cross-electoral variation in ideological magnitude as a function of corruption and other possible confounders. Second, I put to the test the underlying mechanisms between corruption and ideological voting by testing the effect of corruption on perceptual accuracy (H2) and political efficacy (H3) and then estimating with simultaneous (recursive) models whether these two are indeed in the pathway linking corruption and ideological voting. Third, I estimate a hierarchical Heckman selection model to test for the selection bias considering that corruption affects not only ideological voting but also turnout, as well additional model specifications put to test the robustness of the effect of corruption on ideological voting when controlling for different macro confounders.

### 5.1 Two-stage hierarchical model of ideological voting and corruption

In the first part of the analysis, I examine the link between corruption and ideological voting (Hypothesis 1). To do that, I apply a two-step multilevel approach (Jusko and Shively 2005) because vote choice is country-specific with different parties in each election. That means that it has as many categories as parties in the country and cannot be used as a dependent variable in a one-step model. To measure ideological voting for all parties in a country in an election, I thus estimate conditional logit models of vote choice separately for each election in the data. From each model in the 97 elections, I then extract



the coefficient of ideological proximity and its standard error. I regress the coefficients against corruption and the macro confounders. Because the dependent variable in the second-stage is an estimate, I apply Lewis and Linzer's(2005) FGLS approach to EDV (estimated dependent variable) models, which offer consistent standard error estimates in spite of the variation in the sampling variance of the observations on the dependent variable.

First-stage models are separate conditional logit models in each election for each individual  $i$  and party  $j$ :

$$\eta_{ij} = V_{ij} = \alpha_j + \beta I_{ij} + \gamma_i' X_{ij} \quad (1)$$

where  $\eta_{ij}$  is the utility of voter  $i$  from voting party  $j$ ,  $V_{ij}$  is a dichotomous variable taking value 1 if the respondent  $i$  voted for party  $j$ ,  $\alpha_j$  are the party-specific intercepts,  $\beta$  is the unique coefficient of ideological proximity  $I_{ij}$ , which is a party-specific variable, and  $\gamma_i$  is the vector of coefficients for each of the individual characteristics  $X_{ij}$  of respondent  $i$ : gender, age, education, income, market position, urban residency (in countries where it was included in the questionnaire). Models are estimated initially with ideological proximity as the only party-specific predictor. In a second model, I include for robustness checks a variable accounting for whether voter  $i$  is a partisan of party  $j$ . Partisanship is excluded initially because of the "uncertainty about the validity of the concept outside the American context" (Gingrich 2014)<sup>16</sup> and the endogeneity of partisanship and vote choice, especially in new Eastern European democracies.

After estimating conditional logit models in all elections, I extract the election-specific coefficients of ideological proximity  $\beta$ s. These are positive (except for the election in South Korea in 2006 where the coefficient is negative, but statistically insignificant), with a mean of 0.55 and a standard deviation of 0.19. High values indicate that as voters are closer to a party they are more likely to vote for that party. This is highly correlated

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<sup>16</sup>Gingrich (2014) develops a similar analysis of the magnitude of ideological voting as a function of the visibility of welfare states. Her sample includes only developed countries.

with corruption ( $r=0.33$ ). In a second step, I estimate EDV model of  $\beta$  in country  $k$  as a function of corruption  $C_k$  and other macro variables  $M_k$  (economic development and growth, democratic experience, effective number of parties, party age, PR and plurality electoral systems, district magnitude, incumbents' majority, presidentialism, federalism, and West, East or non-Europe distinction). Based on H1, I expect a negative coefficient of corruption,  $\zeta$ :

$$\beta_k = \alpha + \zeta C_k + \theta' M_k \quad (2)$$

Table 1 presents the estimated coefficient of corruption from Equation 2. Model 1 has as dependent variable the coefficients of ideological proximity from models of vote choice without controlling for partisanship. Model 2 includes the coefficients from models including partisanship. Model 3 is similar to Model 1 but excludes three outliers (Mexico (2006) with a negative coefficient, and the USA (2008) and Spain (2004) with a positive coefficient of ideological proximity, significantly higher than the rest of the sample).

**Table 1: Second-stage estimates of ideological proximity on vote choice**

	Model 1 Full sample	Model 2 With partisanship	Model 3 Without outliers
Corruption	-0.223** (0.071)	-0.244*** (0.069)	-0.178* (0.082)
Observations	97	96	94
Log-Likelihood	88.965	89.111	69.335
R <sup>2</sup>	0.515	0.428	0.456

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Full models included in Table 3 in the Online Appendix

In all three models, the coefficient of corruption is statistically significant and negative. The eroding effect of corruption is 0.22. In high corruption countries (e.g. Albania in 2005) the magnitude of ideological voting is on average by around one standard deviation smaller than in low corruption countries (e.g. Denmark 1998 or Finland in 2011).

## 5.2 Corruption effect through perceptual accuracy of parties' positions or political efficacy

As predicted, corruption has a strong, statistically significant, negative effect on ideological voting. I now move on to examine the mechanisms underlying this relationship, through perceptual accuracy of parties' positions (Hypothesis 2) or feelings of political efficacy (Hypothesis 3). To do so, I test whether those who live in high corruption countries are less likely to report correctly parties' positions and to feel politically efficacious compared to those in low corruption countries. A significant effect of corruption in these two models however does not indicate that these are the mechanisms through which corruption erodes ideological voting. A clear empirical answer of the mediating effect is provided by jointly estimating the effect of corruption on ideological voting and on perceptual accuracy of parties' positions, or on feelings of political efficacy, respectively. As such, I examine empirically first H2 and H3 and then put to test the mediation mechanisms.

I start by examining the effect of corruption on perceptual accuracy and political efficacy in two separate models:

$$A_{ik} = \alpha_{1b} + \omega_1 C_{ik} + \omega_2 Z_{ik} + \epsilon_{1ik} \quad (3)$$

$$E_{ik} = \alpha_{1d} + \omega_3 C_{ik} + \omega_4 Z_{ik} + \epsilon_{3ik} \quad (4)$$

Both perceptual accuracy  $A_{ik}$  and political efficacy  $E_{ik}$  are estimated as functions of corruption  $C_{ik}$  and a vector of confounders  $Z_{ik}$ . This vector includes all socio-economic characteristics included in the control variables vector of vote choice models  $X_{ik}$  except partisanship. Instead, the vector includes a measure of strength of partisanship. The expectations are that partisans with strong attachment are more likely to feel political efficacious and place parties more accurately than non-partisans. The vector

of confounders  $Z_{ik}$  also includes all the macro variables from the second-step vote choice model: the level of economic development, democratic experience, party age, PR and plurality electoral systems, effective number of parties, district magnitude, federal state, majority status of the incumbent, its dominance, and the Eastern, Western, or non-European distinction.

Based on H2 and H3, the expectations are that both coefficients of corruption  $\omega_1$  and  $\omega_3$  are negative and statistically significant. As we will see later, the empirical results support both hypotheses.<sup>17</sup> This means that perceptual accuracy and political efficacy are potential paths of corruption to ideological voting. Further tests are however needed to support empirically the mediation mechanisms.

One option for testing the mediation mechanisms is using the first-stage estimates of ideological voting from the previous subsection with country levels of perceptual accuracy and of political efficacy as mediators, in a mediation analysis. The analysis would suffer however of ecological fallacy and it would be hard to say whether indeed those who are less able to identify parties' positions or feel that election results do not matter are the ones voting less ideologically in countries with high corruption. A second option is including the macro corruption variable and the mediators in conditional logit or multinomial models with the pooled sample. To my knowledge this is not possible. A third option, and the one I use further, is to simplify the vote choice models to allow a one-step multilevel model of vote decision with cross-level interaction of ideological proximity and corruption, that can be estimated jointly, in a simultaneous equation model framework, with the above models of perceptual accuracy and political efficacy.

Simultaneous equations models allow to test whether the effect of corruption on ideological voting is indeed indirect, through perceptual accuracy or political efficacy. These models with hierarchical data are not new in political science research. Rueda

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<sup>17</sup>Due to space constraints, I present the results of these models together with those from the simultaneous equations models, later in the section.

and Stegmueller (2015), for example, use the same approach with hierarchical data (individuals nested within regions within countries) to estimate whether the effect of economic inequality on the income gradient in redistribution preferences is mediated by the fear of crime of high income individuals.

To simplify the vote choice models, I look at vote for the incumbent instead of overall vote choice. Vote for the incumbent is measured as a dichotomous variable coded 1 if people voted for the party of the prime minister in parliamentary and semi-parliamentary systems, or of the president in presidential systems.<sup>18</sup> The assumption of this new model is that if people factor ideology less in their vote decision when choosing between all parties, as results in the previous subsection indicate, they also weigh ideology less when deciding whether to vote for the incumbent or not. The disadvantage of the simplified model is that the new model does not allow to estimate the conditional effect of voters' proximity to other political parties. The advantages instead are that I can estimate the individual probabilities of voting for the incumbent across different levels of ideological proximity and corruption, and I can test for retrospective corruption voting.

To measure whether ideology matters less for vote decision when corruption is high, I thus estimate models of vote for the incumbent that include the interaction term ( $C_{ik} * I_{ik}$ ) between corruption  $C_{ik}$  and ideological proximity to the incumbent  $I_{ik}$ . The new model also includes a vector of individual level control variables  $X_{ik}$  for each voter  $i$  in country  $k$ <sup>19</sup>, as well as a vector of macro level control variables  $W_k$ , same as the ones in the EDV models:

$$V_{ik}^* = \alpha_1 + \beta_1 I_{ik} + \beta_2 C_k + \beta_3 C_k * I_{ik} + \gamma_1' X_{ik} + \gamma_2' W_k + \epsilon_{ik} \quad (5)$$

This is a probit regression of (latent) vote for the incumbent ( $V_{ik}$ ). The magnitude of

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<sup>18</sup>A macro dichotomous variable, coded 1 for presidential systems and 0 otherwise, is included in the model to account for differences in support for the incumbent party when the chief executive is a prime-minister or a president.

<sup>19</sup>The vector of control variables includes the same variables used in models of vote choice (Equation 1) with the exception of urban, which has not been recoded in 8 countries. The results are do not change when the variable is included in analysis.

ideological vote is measured by  $\beta_1$  and the impact of corruption on it by  $\beta_3$ . If the assumption that voters vote less ideologically in countries with high corruption when they vote for the incumbent is true,  $\beta_3$  is expected to be negative and statistically significant. Although this would not be different from the results in the previous subsection, comparing the magnitude of  $\beta_3$  with the effect of corruption after accounting for the effect of perceptual accuracy and political efficacy on ideological voting test the hypothesised underlying mechanisms.

To estimate the effect of corruption while accounting for the effect of perceptual accuracy and political efficacy on ideological voting, I include separately the two mediators, perceptual accuracy  $A_{ik}$ , or political efficacy  $E_{ik}$ , and their interaction with ideological proximity in the model of vote for the incumbent:

$$V_{ik}^* = \alpha_{1a} + \beta_{1a}I_{ik} + \beta_{2a}C_{ik} + \beta_{3a}C_{ik} * I_{ik} + \gamma'_{1a}X_{ik} + \gamma'_{2a}W_k + \lambda_{1a}A_{ik} + \lambda_{2a}A_{ik} * I_{ik} + \epsilon_{2ik} \quad (6)$$

$$V_{ik}^* = \alpha_{1c} + \beta_{1c}I_{ik} + \beta_{2c}C_{ik} + \beta_{3c}C_{ik} * I_{ik} + \gamma'_{1c}X_{ik} + \gamma'_{2c}W_k + \lambda_{1c}E_{ik} + \lambda_{2c}E_{ik} * I_{ik} + \epsilon_{4ik} \quad (7)$$

The new models (Equation 6 and 7) are jointly estimated with the models of perceptual accuracy (Equation 3) or political efficacy (Equation 4), accordingly.<sup>20</sup> If perceptual accuracy and/or political efficacy are in the pathway linking corruption and ideological voting, the expectations are that the coefficients of their interaction with ideological proximity are positive and statistically significant  $\lambda_{2a}$  and  $\lambda_{2c}$ , and the coefficients of the interaction of corruption with ideological proximity in Equations 6 and 7,  $\beta_{3a}$  and  $\beta_{3c}$  are smaller than  $\beta_3$  in Equation 5. In other words, if corruption has an effect on ideological voting that is (partially) mediated by perceptual accuracy and/or political efficacy, the effect of corruption left after accounting for the impact of these mediators, is significantly reduced.

This is a simultaneous probit model setup, with the errors from the vote decision and

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<sup>20</sup>The estimates from Equations 3 and 4 do not (and should not) vary when the models are estimated independently or jointly with the models of vote for the incumbent.

each of perceptual accuracy and political efficacy models correlated. I use an exclusion restriction in the vote decision equation to achieve identification by including strength of partisanship only in the models of perceptual accuracy and political efficacy. The expectations are that strength of partisanship has an impact on perceptual accuracy and political efficacy, but not on vote choice as there are no theoretical reasons to expect strong partisans in general to vote for the incumbent more than non-partisans, unless these are only incumbent's partisans. I estimate the models using conditional mixed-process models and maximum likelihood (Roodman et al. 2011). Given the hierarchical structure of the data, i.e. individuals within elections within countries, I calculate standard errors using nonparametric bootstrapping, resampling elections and countries (Rueda and Stegmueller 2015).

Parameter estimates of interest from Equations 3-7 are presented together in Table 2. First, we see that corruption has a strong negative, statistically significant effect on both perceptual accuracy and political efficacy as predicted by both H2 and H3 (Models 5a and 6a in Table 2). The effect of corruption is higher than one standard deviation change in perceptual accuracy and two standard deviations in political efficacy. In other words, people in countries with high corruption are substantially more likely to misplace parties positions and to feel alienated than those in countries with low corruption.

Second, perceptual accuracy and political efficacy have the expected positive effect on ideological voting (the coefficients of interaction terms between ideological proximity and both perceptual accuracy and political efficacy are positive and statistically significant in Models 5b and 6b). Voters weigh proximity to incumbents' ideological position more when they are able to identify parties' positions without error and when they feel that election results matter. In other words, ideological voting is conditional on both perceptual accuracy and political efficacy.

Third, corruption has a negative, statistically significant effect on ideological voting in Model 4, but the effect is reduced substantially after including the mediators,

perceptual accuracy and political efficacy, in Models 5b and 6b. While in models including political efficacy, the interaction term between ideological proximity and corruption is still statistically significant, in the model including perceptual accuracy this becomes statistically insignificant. The fact that the conditional effect of corruption on ideological voting is greatly limited offers support to the hypothesised mechanisms through perceptual accuracy and political efficacy, but does not negate the existence of other mechanisms through which corruption affects voters' likelihood of voting ideologically, for example retrospective corruption voting.

**Table 2: Probit models of vote for the chief executive party and simultaneous models of vote, perceptual accuracy and political efficacy**

	Model 4 Vote	Model 5 (SEM) a. PA	b. Vote	Model 6 (SEM) a. PE	b. Vote
Corruption	-0.052 (0.339)	-0.127*** (0.036)	-0.102 (0.280)	-0.197*** (0.046)	-0.517** (0.198)
IdeolPxCorruption	-0.124** (0.042)		-0.048 (0.041)		-0.054* (0.027)
Ideological proximity	0.226*** (0.024)		-0.192*** (0.051)		0.075*** (0.013)
Perceptual accuracy			-0.077 (0.399)		
Perc acc * Ideol prox			0.504*** (0.067)		
Political efficacy					-2.926*** (0.066)
Pol Ef x Ideol prox					0.032** (0.010)
Observations	66 987	66 987		66 987	
Countries	88	88		88	
Log-Likelihood	-23022.455	29443.640		-22009.183	

Country-election bootstrapped standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Full models included in Table 5 in the Online Appendix

A more intuitive understanding of the conditional effect on ideological proximity of corruption, perceptual accuracy, and political efficacy is given by calculating the marginal effect of ideological proximity in Models 4, 5b, and 6b (Table 3). Based on estimates from



Model 4, I calculate the marginal effect of ideological proximity in countries with high and low corruption, irrespective of the level of perceptual accuracy or political efficacy of the respondent.<sup>21</sup> Based on the results in Models 5b and 6b, the marginal effect of ideological proximity is calculated for high or low corruption, and either high or low perceptual accuracy, or high or low political efficacy, accordingly, because ideological proximity is in interaction with both corruption and the mediators.

Overall, the results in Table 3 indicate that ideological proximity to the incumbent matters less for voters in countries with high corruption than in countries with low corruption, with significant differences also between people with different levels of perceptual accuracy or political efficacy. Looking at the average marginal effects in the first row in Table 3 in particular, from models without the mediators included, there is on average a change in predicted probabilities of 3.4% points for one unit change in ideological proximity (on the 0-10 scale) in countries with low corruption and 2.1% points in countries with high corruption. In other words, the weight of ideological considerations in the probability of voting for the incumbent is 65 % higher in low corruption countries as in high corruption countries.<sup>22</sup> In terms of predicted probabilities, that means that those who are at the farthest ideological distance from the incumbent have a probability of voting for it of 21%, but this probability increases by 20% points when voters hold the same position as the incumbent. In low corruption countries, on the other hand, the difference is of 34% points, with those who have identical positions as the incumbent voting for it with a probability of 49 % and those with opposite positions voting for it with a probability of 15%.

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<sup>21</sup>The average marginal effects are estimated as the average of marginal effects for each respondent using the observed values of all explanatory variables except for those in the interaction. The predicted probabilities are also estimated using the observed values of all explanatory variables. The observed-value approach is preferred to the average case approach, where all explanatory variables are set to their sample mean, because it offers a better prediction for the population under observation and does not refer to a typical, average case that might not even exist in the population (Hanmer and Ozan Kalkan 2013).

<sup>22</sup>A slightly stronger marginal effect is found when perceptions of corruptions are used instead of the macro corruption indicator. See Table 9 in the Online Appendix.

**Table 3: Average marginal effect of ideological proximity conditional on the level of corruption, perceptual accuracy and political efficacy, and their 95 % confidence interval**

	High Corruption		Low Corruption	
	Estimate	95% CI	Estimate	95% CI
<sup>a</sup>	0.022	[0.014-0.031]	0.034	[0.027-0.043]
<sup>b</sup> High Perceptual Accuracy	0.040	[0.030-0.050]	0.044	[0.036-0.052]
<sup>b</sup> Low Perceptual Accuracy	0.018	[0.012-0.025]	0.024	[0.017-0.032]
<sup>c</sup> High Political Efficacy	0.012	[0.006-0.018]	0.023	[0.016-0.029]
<sup>c</sup> Low Political Efficacy	0.010	[0.004-0.016]	0.015	[0.008-0.022]

The 10th and 90th percentile are used for low and high levels of corruption, perceptual accuracy and political efficacy. Average marginal effects and predicted probabilities are calculated based on an observed-value approach (Hanmer and Ozan Kalkan 2013), based on 1000 simulations using the results in Model 4 (<sup>a</sup>), 5b (<sup>b</sup>) and 6b (<sup>c</sup>) in Table 2.

There are also substantive differences in the marginal effect of ideological voting at different levels of perceptual accuracy and political efficacy. In high corruption countries, one unit increase in ideological proximity increases the probability of voting for the incumbent by almost 4% points when voters have a high understanding of parties' position, and by half that effect, 1,8 % points, when they misplace parties on the ideological scale. In low corruption contexts, the change in probabilities is of 4,4 % points for high perceptual accuracy and of 2,4 % points in low perceptual accuracy. Likewise, in countries with high corruption, the change in predicted probability of voting for the incumbent for those moving one step closer ideologically is of 1,2% points when people believe the election results make a difference and of 1,0% point when their belief is low. In countries with low corruption instead, the change is substantially higher: 2,3 % points and 1,5 %, respectively.

Table 3 indicates that when perceptual accuracy and political efficacy come into play, the differences in the marginal effect of ideological proximity in countries with low and high corruption are significantly smaller than in the initial model of vote choice without the mediators. The magnitude of ideological voting is still higher in countries with

high corruption than low corruption, but the prediction power of corruption is reduced when ideological voting is also conditional on perceptual accuracy or political efficacy. These results support again the theoretical expectations that the effect of corruption on the magnitude of ideological voting is partially through perceptual accuracy or political efficacy.

As mentioned in the theoretical section, one other mechanism through which corruption reduces ideological voting is retrospective corruption voting. When looking at the effect of corruption on vote for the incumbent in Model 4 in Table 2, it is however not statistically different than 0, irrespective of the level of ideological proximity.<sup>23</sup> That means that incumbents are not punished more or less in countries with high corruption than in countries with low corruption. The results are in line with Burlacu's(2014) findings that incumbents are punished or rewarded for change in corruption and not its absolute level.

Before moving on to robustness tests of the results from the last two subsections, I present shortly the estimates of the control variables which have statistically significant coefficients in the estimated models. In models of second-stage estimates of ideological proximity on vote choice, economic development and district magnitude have positive and statistically significant effects. In other words, ideological voting is more frequent in developed countries and those with high district magnitude. Ideological voting is however less present in countries outside Europe (coefficient negative and statistically significant). These effects are however not found in one-step models of vote choice. The interaction between ideological proximity and macro institutions is statistically significant only for the effective number of parties. The coefficient of the interaction term is positive, meaning that people are more likely to vote based on ideological principles when a significantly high number of parties participate in elections.

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<sup>23</sup>The effect of corruption on vote choice is depicted by both the coefficients of corruption and of its interaction with ideological proximity. Thus I calculate the average marginal effect of corruption across different values of ideological proximity. The average marginal effects of corruption across the values of ideological proximity are plotted in Figure 2 in the Online Appendix

When it comes to the effect on perceptual accuracy, the macro control variables which have statistically significant coefficients are: number of parties, presidentialism, and non-European context. Results show that voters' ability of placing parties on the ideological scale is higher in presidential regimes, but lower in non-European countries, or when the number of parties is high. For political efficacy, the effective number of parties, non-European contexts as well as presidentialism have all the same negative effect on voters' efficacy. District magnitude and Eastern European contexts instead have a positive effect: people are more likely to say that who is in power matters if they live in Eastern European countries than in Western European countries, or when the district magnitude is high.

### 5.3 Robustness tests

I now turn to different robustness tests of the results and start by examining whether the effect of corruption on ideological voting is not an artifact of people participating less in elections in countries with corruption, because they feel less politically efficacious and do not see parties' positions on the ideological scale. For that I use a Heckman selection model (Heckman 1979) and estimate jointly the impact of corruption on turnout and vote for the incumbent. The modelling strategy and the full estimated models are presented into detail in the Online Appendix (pages 11-15). The results indicate that there is selection bias in the models of voting for the incumbent (the correlation between the error terms from the turnout and vote for the incumbent models is positive and statistically significant). The coefficient of the interaction term between corruption and ideological proximity is slightly reduced in magnitude, but it is still statistically significant and negative, meaning that corruption still has a strong eroding effect on ideological voting after accounting for its effect on turnout. I thus conclude that although there is selection bias in the voting for the incumbent model, this does not constitute a threat, at least when it comes to the main focus of the paper.

I also conduct a number of robustness tests for alternative model specifications for both second stage estimates of ideological proximity on vote choice and one-step hierarchical model of voting for the incumbent. For the former, I estimate first a simple baseline model of corruption and then additional models with different groups of predictors: 1) economic development and democracy for the programmatic-linkage theories; 2) electoral and party specific variables; 3) government structure variables; and 4) models excluding Eastern European countries from the sample (Table 4 in the Online Appendix). For the latter, I include in addition to ideological proximity's interaction with corruption, its interaction with programmatic-linkage predictors (economic development, democratic experience and party age), as well as electoral and party variables (effective number of parties, district magnitude and electoral systems). I also reduce the number of macro indicators to those from programmatic linkage theories, and run the models without Eastern European countries. Furthermore, I run the model of voting for the incumbent with country and year fixed effects (Table 6 in the Online Appendix). The results show that the effect of corruption on ideological voting is robust to all these alternatives.

## 6 Discussion and conclusions

This paper is about the effect of corruption on ideological voting. Building on theories of political corruption and electoral behaviour, I argue that the negative consequences of corruption do not end with people abstaining or not punishing the incumbent. Corruption has also eroding effects on ideological voting. Ignoring these effects would underestimate the harmful impact of corruption in politics. When ideology is not a relevant factor in elections, manifestos and policy reforms lose significance in the political spectrum. Elections as means to transmit policy preferences lose their role, and representatives do not feel compelled to follow an ideological program because voters have not chosen them based on their policy proposals. These weaken voters' connection to parties and the

accountability mechanisms and thus create the perfect environment for corrupt politicians to follow their interests and not the party manifestos.

In testing the conditional effect of corruption on ideological voting, I propose and show empirically that the mechanisms underlying this relationship are perceptual accuracy of parties' positions and political efficacy. Although, the results of simultaneous equations models should be understood only as correlations between corruption, perceptual accuracy, political efficacy and ideological voting, they indicate strong links between corruption, political perceptions, and political behaviour previously ignored by political scientists. Students of corruption have found that citizens' understanding of the political system is affected by corruption, but they only tested how this then affects voters' likelihood of voting. Scholars of ideological voting have identified several factors that affect voters' potential to place parties on the ideological scale and their confidence in parties' ability to implement the manifestos, but ignored the role of corruption. Therefore, the results of this study contribute to the two literatures and highlight the link between them. Future studies could explore other possible mechanisms between corruption and voting models, e.g. political confidence, which have not been discussed in this paper because of data availability constraints.

Treated so far as mediation mechanisms, the effects of corruption on perceptual accuracy and political efficacy also have important theoretical implications in and of themselves, especially for research on the quality of democratic governance: by fighting corruption, policy-makers can change voters' understanding of parties and of their ideological positions, and consolidate people reliance on politicians' role as representatives as well as their position as principles in the dynamic process of representation (see Dalton et al. (2011), Powell (2000), McDonald and Budge (2005)).

Another significant finding of this study are the results from the Heckman selection models. I find that vote choice models suffer of selection bias, but the change in coefficients of the estimates of interest is small. These results indicate that although people are

more likely to abstain when corruption is high, this still plays a role in voting decisions. Electoral behaviour scholars analyse the predictors of vote choice without considering that those predictors could influence who is in the sample and thus bias the results. In this paper, the bias is considerable but does not invalidate the theoretical expectations. Future research should explore the chronological order of turnout and voting strategies. Do people abstain because they cannot identify a party to vote for or the decision of voting ideologically follows the decision of showing up to vote?

Going back to the novel finding that corruption erodes ideological voting, I want to re-emphasize its relevance for research on programmatic party-voter linkages. For voters, corruption reduces the incentives to look for the party closest to their ideological position and thus they vote for the lesser of the two evils, either punishing or rewarding the incumbent, without taking into account future ideological positions. For parties, corruption reduces the ability to plan ahead if policies do not drive voters. This means that programmatic linkages are eroded from both voters and parties' sides, independently of other socio-economic or political factors.

Before concluding, it is important to discuss again the relationship between ideological voting and retrospective corruption voting in countries with high corruption. In this study, I assume that corruption can reduce ideological voting independently of retrospective voting. The two underlying mechanisms linking corruption and ideological voting are thus based on the assumption that ideological voting is not necessarily an opposite voting strategy to retrospective voting. In reality voters can employ different voting decision mechanisms when corruption is high. First, based on the theoretical expectations of this study, voters cannot identify political parties so they base their vote choice on other strategies: e.g. punish the incumbent for high corruption or reward it for pork barrel. Second, voters punish the incumbent for high corruption and as such they do not vote ideologically for the incumbent, but they could still apply an ideological voting strategy when voting for an opposition party. Based on my results from the two-stage

estimates models, this is nevertheless unlikely because voting for all parties, and not only the incumbent, is reduced in countries with high corruption. Third, voters reward the incumbent for pork barrel irrespective of whether they are in its ideological proximity or not, and thus they do not apply the ideological voting strategy either for the incumbent or other parties. Based on the insignificant effect of corruption on voting for the incumbent found in the second part of the analysis, the lack of ideological voting has not (been) replaced (by) either the reward or punish voting strategies.

Last, the results in this study test the cross-national correlation and not temporal causation between ideological voting and corruption. As such, one could think that when corruption increases, people start voting less on ideological principles, or that less ideological voting leads in time to more corruption. In other words, voters who base their vote decision less on ideological programs could open the door to corruption for certain politicians, which in turn increases corruption, and thus reduces the likelihood of voting ideologically for other people. On the same token, voters who vote ideologically when corruption is high could send a message to parties to focus on policies, which in time could reduce corruption and increase the appeal of ideological voting for other voters.

The silver lining of this study is nevertheless that contrary to previous perceptions that ordinary citizens are ignorant and they do not respond to politics adequately, I find that voters adapt their behaviour to corruption. When faced with high uncertainty regarding parties positions and the performance of corrupt representatives in implementing the electoral promises, people pay less attention to ideological positions and electoral promises when voting. In countries with low corruption instead, voters have higher confidence in parties' positions and their ability of implementing electoral programs, and as such they choose the party closest to them on the ideological scale more frequently.



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